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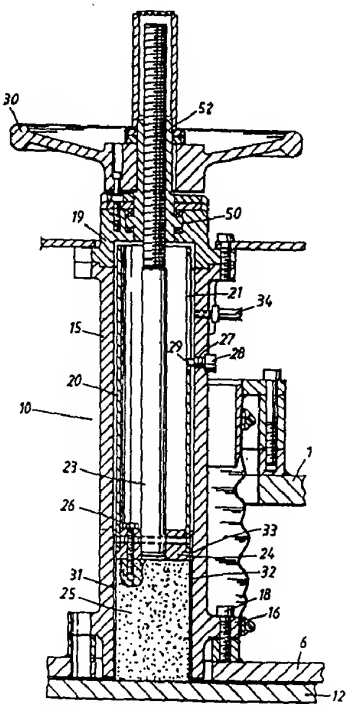
(54) Title: ROTARY REGENERATIVE HEAT EXCHANGER

(57) Abstract

The invention relates to a regenerative, rotating heat exchanger of the kind having a cylindrical part containing regenerator mass and sector plates (6) separating medium flows, the outer ends of which sector plates being provided with displaceable and lockable stop bars perpendicular to the sector plates, which stop bars maintain a certain clearance between the ends of the sector plates (6) and an edge flange (12) or similar means of the cylindrical part against which edge flange (12) stop bars (25) are adapted to slide. The stop bars (25) have wearing surfaces made of carbon or graphite and can be screwed forward a few mm at a time concurrently with the abrasion. An essential reduction of the abrasion has been obtained according to the invention in that each stop bar (25) has a play (31) round the periphery to a surrounding socket (15) through which play a pressure medium jet is directed against the edge flange (12) for obtaining cleaning by blowing, cooling, and a reaction force directed from the edge flanges (12) towards the ends of the sector plates.



C L A I M S

1. A regenerative heat exchanger comprising two parts, one of which being rotary relative to the other round a common centre axis, one of the parts (2) being essentially cylindrical and containing regenerator mass (3), and the remaining part (1) comprising medium ducts having axially directed inlet ducts and outlet ducts for heat emitting and heat absorbing media, which inlets and outlets are separated from each other by sector shaped plates (6,8) positioned for sealing purposes close to the end surfaces of the cylindrical part, which plates are pivotally connected to axially fixed centre plates (5,7) positioned at the ends of the cylindrical part and attached to said remaining part, in addition to which the sector plates (5,6) at their radially outer ends are provided with devices (10) which each comprises at least one cylindrical stop bar (25) for setting a clearance between the ends of the plates and an edge flange (12) or similar means at each end of the cylindrical part (2), which stop bar (11) is mounted axially displaceable in a cylindrical socket (15) at respective sector plate end (6,8) perpendicular to this and adjustable by a screw mechanism (50-53) connected to the sector plate end, **characterized in that** a play (31) between the periphery of the cylindrical stop bar (25) and the inside of the socket (15) is designed with at least one axial through passage (31,36,37) that is connected to a pressure source (34) for gas, preferably air, water, water steam or a similar medium.

2. A heat exchanger according to claim 1, **characterized in that** the through passage (31) extends essentially all around all the periphery of the stop bar (25).

3. A heat exchanger according to claim 1, **characterized in that** the play essentially is formed by shallow, axial grooves (36) in the periphery surface of the stop bar (25).

4. A heat exchanger according to claim 1, **characterized in that** the play essentially is formed by shallow, axial grooves (37) in the inside of the socket (15).

5. A heat exchanger according to any of claims 1-4, characterized in that at least one essentially axial through passage (38) further is arranged within the periphery of the stop bar (25) and connected to a pressure source for gas, preferably for air, water, water steam or similar medium.

6. A heat exchanger according to claim 2 and 5, characterized in that the through passage (31) round the periphery of the stop rod (25) is connected

to a pressure source with higher pressure than the pressure source for the inner through passage (38).

7. A heat exchanger according to any of claims 1-6, charcterized in that the stop rod (25) is journalled in the socket (15) prevented from turning by a guide (21,28) cooperating with the socket (15)

8. A heat exchanger according to any of claims 1-7, characterized in that the medium jets directed by the through passages (31,36,37,38) towards the edge flanges (12) create a reaction power sufficient for reducing at least a part of the pressure of the stop bars (25) against the edge flanges (12).